

pending claims is wholly missing from the cited prior art, and therefore the pending rejection is in error.

Applicants once again note with appreciation the indication of allowance of claims 6-8, 18, 20, 22, 24 and 26 and of allowable subject matter being recited by claim 4.

For the reasons set forth below, it is respectfully submitted that all pending claims are patentable over the cited prior art.

## **II. The Rejection Of The Claims Under 35 U.S.C. § 103**

Claims 1-3, 9, 19, 21, 23, 25 and 27 were rejected under 35 U.S.C. § 103 as being obvious over USP No. 6,262,785 to Ikeda, in view of USP No. 5,822,176 to Sano, and USP No. 5,277,723 to Kodama. For the following reasons, it is respectfully submitted that all pending claims are patentable over the cited prior art.

First, with regard to claim 1, the claim recites that: (1) **a coating** is disposed on the external electrode which includes a thermoplastic or thermosetting resin, and (2) that **a conductive adhesive layer** is provided on the coating. Referring to Fig. 1, the coating containing a thermoplastic resin is identified by reference numeral 6 and the conductive adhesive layer is identified by reference numeral 5. **As is clearly shown in Fig. 1 and recited by the claim, the coating 6 including a thermoplastic resin and conductive adhesive layer 5 of the present invention are distinct and separate layers.**

Turning to the cited prior art, as set forth in the pending rejection, Ikeda is relied upon as disclosing both the claimed coating containing a thermoplastic or thermosetting

resin disposed on the external electrode and the conductive adhesive disposed on the coating. *However, it is clear that Ikeda does not do so.* Referring to Fig. 1 of Ikeda, as shown therein, Ikeda discloses an external electrode 5 which is coupled to a wiring electrode 9 via conductive adhesive layer 11. Even assuming *arguendo* that the conductive adhesive layer 11 of Ikeda corresponds to the claimed coating having a thermoplastic or thermosetting resin disposed on the external electrode, Ikeda fails to disclose or suggest an element corresponding to the claimed conductive adhesive layer. ***Thus, Ikeda fails to disclose or suggest both the coating and the conductive adhesive layer limitations recited by claim 1.***

It is further noted that external electrode 5 of Ikeda does not contain a coating of thermoplastic resin disposed on the outside thereof. It is noted that an electrically conductive paste is coating on both ends of a sintered electronic part (see, Ikeda, col. 3, lines 19-28). However, this is during the process of forming the electrodes 5. Ikeda continues to explain, that once the ends of the sintered electronic part are coated with the conductive paste, the part is dried and burned to form the external electrodes 5. It is noted that typically such a burning (i.e., sintering) process is performed at a temperature of about 1000° or higher, and as a result, the resin contained in the conductive paste is burnt out and therefore not present in the external electrode 5 formed by the process. Thus, the external electrode 5 of Ikeda does not have a coating containing thermoplastic or thermosetting resin disposed thereon.

Moreover, in the process of Ikeda, once the electrodes 5 are formed, the electrodes are subjected to irradiation process utilizing ultraviolet light so as to form hydroxy radicals (OH) on the surface of the external electrodes (see, Ikeda, col. 3, lines

23-27), which are subsequently utilized to form a strong bond with the epoxy group contained in the conductive adhesive 11. Thus, it is clear that the electrodes 5 of Ikeda, which have OH radicals formed on the surface thereof, do not have a coating containing a thermoplastic or thermosetting resin disposed thereon. Nor is there any motivation to modify Ikeda to do so, as Ikeda expressly teaches forming OH radicals on the surface of the electrode 5.

Accordingly, as only Ikeda is relied upon as disclosing the two foregoing limitations, and Ikeda fails to do so, the combination of cited prior art fails to establish a *prima facie* case of obviousness. As is well known, in order to establish a *prima facie* case of obviousness, ***each and every claim*** limitation must be disclosed or suggested by the prior art. See, M.P.E.P. § 2143.03.

***It is further noted that in the pending rejection, the conductive adhesive layer 11 of Ikeda is asserted as covering both of the foregoing elements recited by claim 1 (i.e., (1) the coating containing a thermoplastic or thermosetting resin disposed on the external electrode and (2) the conductive adhesive disposed on the coating). Clearly, such an interpretation of Ikeda is also improper.***

***Specifically, as noted above, each and every limitation must be disclosed by the prior art references relied upon to form the rejection. It is improper to rely upon a single element in the reference as disclosing multiple distinct and separate elements in the claims. Thus, in this instance, it is improper to assert that the conductive adhesive layer 11 of Ikeda corresponds to both the claimed coating containing a thermoplastic or thermosetting resin disposed on the external electrode and the conductive adhesive disposed on the coating.***

Turning to claim 9, this claim recites that the coating of a conductive adhesive disposed on the external electrode contains a conductive filler, and more importantly, that the coating is disposed on the **entire surface** of the external electrode (as shown, for example, in Figs. 1 and 2 of the present invention). Turning to the prior art, it is clear that Ikeda does not disclose an external electrode having a conductive coating disposed on the entire surface thereof. Nor does any of the other prior art appear to cure this deficiency of Ikeda.

Once again, the pending rejection appears to assert that the conductive adhesive layer 11 of Ikeda corresponds to the claimed coating of a conductive adhesive containing a conductive filler formed on the entire surface of the external electrode. However, it is clear that the conductive adhesive layer 11 of Ikeda is disposed only on the lower surface of the external electrode 5 of Ikeda as shown in Fig. 1. Thus, at a minimum, Ikeda does not disclose or suggest the foregoing limitation recited by claim 9. None of the other prior art references are relied upon as disclosing this limitation. Accordingly, it is respectfully submitted that claim 9 is patentable over the cited prior art.

### III. **All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, **Hartness International Inc. v. Simplimatic Engineering Co.**, 819 F.2d at 1100, 1108 (Fed. Cir. 1987).

Accordingly, as claims 1 and 9 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for

allowance.

**IV. Request For Notice Of Allowance**


Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please delete claim 2, without prejudice, and amend claims 1, 4, 9 and 19-26 to read as follows:

1. (Twice Amended) An electronic part comprising:

an external electrode; and

a coating including a thermoplastic or thermosetting resin disposed on a surface of said external electrode,

wherein a conductive adhesive layer is provided on said coating and said conductive adhesive layer contains a conductive filler consisting of gold, silver, platinum, nickel, zinc, palladium, or an alloy or a mixture containing these metals.

4. (Amended) The electronic part as set forth in claim [2] 1, wherein the thickness of said coating is less than the particle diameter of said conductive filler.

9. (Twice Amended) An electronic part mounting element comprising:

an external electrode;

a coating of a conductive adhesive containing a conductive filler formed on the entire surface of the external electrode of the electronic part,

wherein said external electrode of said electronic part is electrically connected to a connecting terminal of an element on which said electronic part is to be mounted, said coating operative as a connecting element for connecting said external electrode to said connecting terminal,

wherein said conductive filler consists of gold, silver, platinum, nickel, zinc, palladium, or an alloy or a mixture containing these metals.

19. (Amended) The electronic part as set forth in claim 1, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 10.0  $\mu\text{m}$ .

20. (Amended) The electronic part mounting element as set forth in claim 6, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 10.0  $\mu\text{m}$ .

21. (Amended) The electronic part mounting element as set forth in claim 9, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 10.0  $\mu\text{m}$ .

22. (Amended) The electronic part as set forth in claim 18, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 10.0  $\mu\text{m}$ .

23. (Amended) The electronic part as set forth in claim 1, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 5.0  $\mu\text{m}$ .

24. (Amended) The electronic part mounting element as set forth in claim 6, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 5.0  $\mu\text{m}$ .

25. (Amended) The electronic part mounting element as set forth in claim 9, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 5.0  $\mu\text{m}$ .

26. (Amended) The electronic part as set forth in claim 18, wherein the surface roughness (Ra) of said external electrode of is in the range of 0.1  $\mu\text{m}$  to 5.0  $\mu\text{m}$ .